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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,607	02/10/2004	Shinya Nakai	118622	1677
25944	7590	09/10/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER TRAN, TUAN A	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 09/10/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/774,607

Applicant(s)

NAKAI, SHINYA

Examiner

Tuan A. Tran

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakuragawa et al. (6,759,924).

Regarding claim 1, Sakuragawa discloses a front end module for processing transmission signals and reception signals in each of a first frequency band and a second frequency band (See fig. 12), the front end module comprising: a first separating means 23 (branching filter) connected to an antenna and separating the first and second frequency bands from each other; a second separating means 20a connected to the branching filter 23 for separating the transmission signals and the reception signals in the first frequency band from each other and includes a first pair of SAW filters or bulk acoustic wave filters 11a, 12a ; the third separating means 20b connected to the branching filter 23 for separating the transmission signals and the reception signals in the second frequency band from each other and includes a second pair of SAW filters or bulk acoustic wave filters 11b, 12b; a single multi-layer substrate for integrating the first to the third separating means, wherein the first separating means is made up of a

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conductor layer located inside or on a surface of the multi-layer substrate (See figs. 9-12 and col. 4 line 59 to col. 6 line 36).

Regarding claim 2, Sakuragawa discloses as cited in claim 1. Sakuragawa further discloses the first and second pairs of SAW filters are mounted on the multi-layer substrate; and at least a part of circuit portions of the second and third separating means except the SAW filters (e.g. the phase shift lines 21a, 21b) is made up of the conductor layer located inside or on the surface of the multi-layer substrate 101 (See fig. 10 and col. 5 lines 1-15).

Regarding claim 3, Sakuragawa discloses as cited in claim 1. The branching filter 23, as disclosed by Sakuragawa, is widely known as diplexer that comprises a low pass filter for allowing signals of frequencies in the first frequency band to pass through and intercepting signals of frequencies in the second frequency band; and a high pass filter for allowing signals of frequencies in the second frequency band to pass through and intercepting signals of frequencies in the first frequency band.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuragawa et al. (6,759,924).

Regarding claim 4, Sakuragawa discloses as cited in claim 1. However, Sakuragawa does not explicitly mention that the first and second frequency bands are CDMA bands. Since Sakuragawa does suggest that the front end module is applicable to multi-band system (See col. 5 lines 50-56) and CDMA bands are widely known in the art; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reconfigure the front end module such that it is applicable to CDMA bands for the advantage of expanding the capability of the system to various communication spectrums.

Allowable Subject Matter

3. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5-6, Sakuragawa discloses as cited in claim 1. Sakuragawa further discloses the first separating means is a branching filter 23, the second and third separating means 20a, 20b include delay lines for impedance adjustment (phase shift lines 21a, 21b) that is provided between the SAW filters 11, 12 and the branching filter 23, and inherently a ground layer and terminals disposed at a bottom surface of the multi-layer substrate, wherein the SAW filters 11, 12 are mounted on a top surface of the multi-layer substrate (See figs. 10, 12). However, Sakuragawa does not mention that a conductor layer that forms the delay lines and that is disposed between the ground layer and the top surface of the multi-layer substrate, and a conductor layer that

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forms the branching filter and that is disposed between the ground layer and the bottom surface of the multi-layer substrate as specified in claim 5.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ikata (6,380,823).

Response to Arguments

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Tran whose telephone number is (571) 272-7858. The examiner can normally be reached on Mon-Fri, 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Tuan Tran
AU- 2618

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